

35. (New) Sputtering chamber comprising at least one sputtering source with a new sputter surface at least approximately symmetrical with respect to a first axis, perpendicular on said new sputter surface, a substrate carrier which is arranged to be drivingly rotatable about a second axis, wherein said first and said second axes are oblique with respect to one another and said sputtering source is a magnetron sputtering source with at least one toroidal magnetic field around said first axis with symmetric field polarity considered in a cutting plane through said new sputter surface and containing said first axis.

36. (New) The chamber of claim 35, wherein said new sputter surface is substantially rotationally symmetrical with respect to said first axis.

37. (New) The chamber of claim 35, wherein said first axis and said second axis intersect at least approximately.

38. (New) The chamber of claim 35, wherein, with respect to an angle β between said first axis and said second axis, $30^\circ \leq \beta \leq 60^\circ$.

39. (New) The chamber of claim 35, wherein, with respect to an angle β between said first axis and said second axis, $40^\circ \leq \beta \leq 55^\circ$.

40. (New) The chamber of claim 35, wherein, with respect to an angle β between said first axis and said second axis, $43^\circ \leq \beta \leq 50^\circ$.

41. (New) The chamber of claim 35, wherein an angle β between said first axis and said second axis is approximately 45° .

42. (New) The chamber of claim 35, wherein said first axis and said second axis have a smallest mutual spacing situated at least approximately on a surface which is to be sputter coated of a substrate applied to said substrate carrier.

43. (New) The chamber of claim 35, wherein said substrate carrier is located within said chamber at least approximately horizontally.

44. (New) The chamber of claim 35, with at least one substrate on said substrate carrier and wherein a projection of said new sputter surface onto a plane perpendicular to said first axis is larger than a projection of a surface of said substrate to be sputter coated onto said plane.

45. (New) The chamber of claim 35, further comprising at least two of said sputtering sources.

46. (New) The chamber of claim 35, wherein there is provided in said new sputter surface at least one circular erosion ditch said toroidal magnetic field beneath said ditch having a circular locus of larger erosion depth, the radius

of said locus with respect to said first axis being r_{Tr} said first and second axes having a smallest mutual spacing at a locus spaced by a distance D from said new sputter surface and wherein $1/4 \leq r_{Tr} / D \leq 2/3$.

47. (New) The chamber of claim 35, wherein said new sputter surface is substantially rotationally symmetrical with respect to said first axis and has a diameter Φ_T and wherein a locus of smallest mutual spacing of said first and of said second axis has a distance D to said new sputter surface and wherein $3/4 \leq \Phi_T / D \leq 2$.

48. (New) The chamber of claim 47, wherein $\Phi_T = \text{approx. } 1.2 D$.

49. (New) The chamber of claim 35, wherein said substrate carrier has a circular receiving surface for at least one substrate said receiving surface having a diameter Φ_s with respect to said second axis, a locus of smallest mutual spacing of said first and second axes having a distance D from said new sputter surface and wherein $\Phi_s / D \leq 1.8$.

50. (New) The chamber of claim 49, further comprising at least one of said substrate on said receiving surface said locus being situated at least approx. on a plane defined by a surface of said at least one substrate to be sputter coated.

51. (New) The chamber of claim 35, wherein said new sputter surface is rotationally symmetrical with respect to said first axis and said substrate carrier comprises a substrate receiving surface which is rotationally symmetrical with respect to said second axis, said new sputter surface defining for a diameter Φ_T with respect to said first axis and said substrate receiving surface defining for a diameter Φ_s with respect to said second axis and wherein $0.5 \leq \Phi_s / \Phi_T \leq 2.4$.

52. (New) The chamber of claim 51, wherein $1 \leq \Phi_s / \Phi_T \leq 2.4$.

53. (New) The chamber of claim 35, wherein said substrate carrier has a substrate receiving surface which is rotationally symmetrical with respect to said second axis and defines, for a diameter Φ_s with respect to said second axis, $50 \text{ mm} \leq \Phi_s \leq 400 \text{ mm}$.

54. (New) The chamber of claim 53, wherein there is valid $50 \text{ mm} \leq \Phi_s \leq 300 \text{ mm}$.

55. (New) The chamber of claim 54 wherein said diameter Φ_s amounts to one of 64 mm and of 120 mm and of 160 mm and of 240 mm.

56. (New) The chamber of claim 35, wherein said substrate carrier is linearly drivingly displaceable in a direction of said second axis.

57. (New) The chamber of claim 35, wherein a surface of said substrate carrier facing said new sputter surface and said new sputter surface bound a process space on two sides thereon.

58. (New) A method for manufacturing coated workpieces comprising the steps of

introducing a workpiece into a sputtering chamber,

rotating said workpiece about a rotational axis,

providing a sputtering source with a sputtering surface and having a central axis which is oblique with respect to said rotational axis,

sputter coating said workpiece by said source thereby providing at said source at least one toroidal magnetic field with a symmetric field-polarity consider in a cutting plane through said sputter source which contains said normal axis.

59. (New) The method of claim 58, wherein said coated substrate is one of a data storage disk and of a wafer.

REMARKS

A new substitute specification and marked-up copy are submitted without claims, responsive to the Notice.